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Stable Ischemic Heart Disease

PREVIOUSLY RESPONDING NO-OPTION PATIENTS WITH RESIDUAL OR RECURRENT REFRACTORY ANGINA PECTORIS AND DOCUMENTED ISCHEMIA BENEFIT FROM REPEAT INTRAMYOCARDIAL INJECTION OF AUTOLOGOUS BONE MARROW CELLS

Poster Contributions

Hall C

Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Stable Ischemic Heart Disease: Making an Impact

Abstract Category: 26. Stable Ischemic Heart Disease: Therapy

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Background: We demonstrated that intramyocardial bone marrow cell (BMC) injection improved myocardial perfusion and anginal symptoms in patients with refractory angina pectoris (Ramshorst *et al.* JAMA 2009). Since some patients experienced recurrent anginal complaints, this study was designed to evaluate the efficacy of a repeat intramyocardial BMC injection.

Methods: Patients with refractory angina pectoris, who improved after previous intramyocardial BMC injection and experienced recurrent anginal complaints with documented ischemia, were enrolled. Using the NOGA-system, 100×10^6 autologous BMC were intramyocardially injected. Single-photon emission computed tomography was done at baseline and after 3 months to assess myocardial perfusion. Anginal symptoms and quality of life (QoL) were evaluated at baseline, 3 and 6 months follow-up.

Results: In total, 23 patients (17 male, 69 ± 9 years) were injected 4.6 ± 2.5 years after their first BMC injection. After repeat injection, summed stress score significantly improved similar to the first injection (resp. $P < 0.001$ and $P = 0.06$). Patients reported a decrease of anginal episodes equal to the first injection (resp. $P = .02$ and $P = .25$). Also QoL improved ($P = .02$). However, improvement was more pronounced after the first injection ($P < .01$).

Conclusion: Repeat intramyocardial BMC injection improves myocardial perfusion and anginal symptoms in previously responding patients with recurrent anginal complaints and documented myocardial ischemia.

